

ABSTRACT OF THE DISCLOSURE

Photosensor assemblies have, for each color, multiple line-arrays of photosensors. For each color, the spectral bandwidth received by each line-array is different. The additional spectral bandwidths are used to improve the spectral measurement accuracy, and to increase bit-depth. In one example, one row of a staggered array receives light having a first spectral bandwidth, and a second row of the staggered array receives light having a different spectral response. In a second example, photosensors with different sizes receive light having different spectral bandwidths.